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# THE UNCONTROLLABLE FIRE

*By Roy Headley*

SOME men say that the Government is all wrong in keeping fire out of the National Forests, that keeping fire out simply means piling up an accumulation of inflammable brush and litter, and that sooner or later a fire is bound to get started in this accumulation and sweep all before it.



Trinity National Forest, Calif. A forest protected from fire. No burning allowed.  
Note the young growth coming in.

There is a certain amount of truth in this theory. Fires which are allowed to run at will over a country undoubtedly consume large quantities of the dead wood and vegetable matter on the ground, and in addition much living brush and many small trees are killed or destroyed. Sometimes the fire leaves dead but unconsumed material which makes the area more inflammable than ever, and sometimes the fire kills even the mature timber and brings about the growth of an impenetrable brush field; but in general it is true of a large acreage (particularly in yellow pine) that fire keeps the ground "clean" so one can ride around over it on horseback and see long distances.

On the other hand, when the Forest Service keeps fires out, the litter certainly accumulates; the brush, at least where former fires have left insufficient mature trees to shade it out, gets worse; and in addition to the litter and the brush there comes up usually a rank growth of tree seedlings—often occurring in dense thickets. All this growth seems like "brush" to the man who has to ride through it after cattle, but the forester distinguishes very carefully between



brush and tree seedlings, for the same reason that the grain farmer distinguishes between weeds and wheat.



McCloud Flat, Siskiyou County, Calif. Area burned over three times in seven years.  
Notice scarcity of timber and density of brush.

Now all this litter and brush and tree reproduction unquestionably makes it harder to stop a fire than if the ground had been kept "clean" by repeated burnings. What, then, shall the Government do? If its main object was to keep the ground clear, and if there were large areas of agricultural lands to be cleared, the burning which the Indians and early Spaniards are said to have practiced might secure excellent results. Its object, since all large areas of agricultural lands are eliminated, is to make the National Forests produce as near as practicable to 100 per cent of their maximum timber-producing capacity, instead of carrying, as they now do, a mere fraction of the possible stand. We have now on the National Forests an average of, say, fifteen mature trees per acre, while we should and can have at least twenty-five. One reason we have fifteen instead of twenty-five is—fire. The old Spanish and Indian method of keeping the ground clean was, of course, a poor method of getting a full crop of timber. A look at one of the brush fields, so common in the timber belt in northern California, on most of which there is evidence that fire killed the original good stand of timber, will prove this to one's satisfaction. Whenever we see a brush field with dead snags still standing in it we may know that the process of converting timberland into brush fields by fire is going on there right under our eyes.

If, then, the purpose of National Forest management is to increase the density of the stand of timber and to bring the annual income of salable timber to a maximum at the earliest practicable date, what is to be done about the increasing difficulty of protecting such a forest from fire?

There are sincere people who believe that, because of the dense growth which has accumulated and will accumulate as a result of keeping fires out, a fire will sometime occur which no human power



can control. Is it true that such a fire may sweep away not only the tree reproduction so much desired, but also a lot of the mature and merchantable timber which would have survived but for the practice of keeping fires out? And, if so, why try to improve our forests if the effort will merely lead eventually to the destruction of such forests as we now have?

There are, no doubt, pessimists in San Jacinto and Hemet who say there is no use to rebuild anything but shacks, because, sooner or later, earthquakes will wreck any first-class buildings they may put up. Nevertheless, the towns of San Jacinto and Hemet have already been rebuilt, and with first-class structures, for that is the spirit which has made California and which has made the Pacific Coast.



McCloud Flat, Siskiyou County, Calif. The result of repeated fires. Note size and density of brush.

Would anyone seriously propose that the Forest Service abandon the effort to improve the forests, because the very improvement of the forests would make fire protection more and more difficult? "But," someone may say, "building a fully productive forest and building cities are not the same thing." "I am still afraid," this doubter may say, "that fire can not be controlled as the litter and other material accumulate." It happens that facts have been recently brought out that bear directly on this point.

If the theory is true that fires can not be controlled after protection has allowed litter, etc., to accumulate, then it is reasonable, is it not, to expect that losses from fire would increase as the years go by and the inflammable material piles up? And if it should be found that the contrary actually happens and that, as the litter and reproduction increase with passing years of fire protection, the losses from fire actually decrease—then should not the prophecy of failure for fire protection stand discredited; and should not the burden of proof fall on the pessimist who questions the ability of the Forest Service to keep out fires permanently? Here is what has actually happened:



Systematic fire protection by the Forest Service on the National Forests in California began in 1905 and 1906, about 12 years ago. In this 12-year period an enormous amount of litter has accumulated; brush has grown to full density; and tree reproduction has thrived in many parts of the country until the very face of nature is altered. The greater part of the fire losses on the National Forests during this period have occurred in the two bad fire years—1910 and 1917.



McCloud Flat, Siskiyou County, Calif. In the last stages. This area has been burned over seven times in the last 15 years. Almost no living trees left. Brush tall and thick.

In comparison with 1910, the season of 1917 was not only the longest and driest; it was a harder fire season because seven more years of litter, brush, and seedlings had accumulated. Everyone knows how much stuff grows in seven years. The year 1917 should therefore have witnessed much more severe losses if there is any truth in the pessimist's theory that fire protection can not protect permanently. What actually happened was this: In 1910 the area of timberland burned over in the California National Forests was 240,000 acres. In 1917 the area of timberland burned over was 20 per cent less. In 1910 the merchantable timber destroyed amounted to 116 million feet. In 1917 only 22 million feet were destroyed—a decrease of 81 per cent.

In 1918 there was another bad fire season, closely comparable in many respects with the 1910 and 1917 seasons; but the area burned over was only 73,000 acres and the timber destroyed was only 20,000,000 feet. In short, losses are being progressively reduced as the years go by.

In the face of this record is there any ground for saying that protection can not protect permanently? The Forest Service asks the earnest support of every loyal citizen in keeping down fire losses. Every individual can give material help by getting the safety habit with fire and by urging others to do the same. Forest and county officials will appreciate it if you will offer to aid them in enforcing the State and Federal fire laws.